tions are probably those dealing with the evil effects of conception occurring during a state of drunkenness. Evidence obtained by the questioning of patients on this point is anecdotalism at its worst and most useless. One does not gather that the mothers in any instance were questioned *before* the birth of their malformed and sickly young.

The literature dealing with the effect of alleged germ poisons other than alcohol is also reviewed. Lead, mercury, caffeine, nicotine, and several others, are included. About some of them little is known, but in the case of lead one is left with the impression that, taking into consideration the far smaller body of observations, the hope of demonstrating a more profound phenotypic blastopthoric effect is brighter than in the case of alcohol. It is possible that experimental work with lead would lay a much surer foundation for subsequent more subtle and more practically important inquiries into the effect of alcohol.

J. A. FRASER ROBERTS.

SEXUAL RESEARCH

Greenwood, A. W., Ph.D., M.Sc., F.R.S.E. (Editor). *Proceedings of the Second International Congress for Sex Research, London,* 1930. Edinburgh, 1931. Oliver and Boyd. Pp. xii+ 637. Price 21s.

THIS handsome and well illustrated volume consists of a collection of nearly all the papers, some eighty in all, read before the International Congress for Sex Research held in London in 1930. The papers are classified under five main heads: (1) Biology, (2) Hormones, (3) Therapy, (4) Contraception, and (5) Sociology. Those in the biological group are further divided according to the kinds of organisms to which they relate, that on sex control with Cladocera by A. M. Banta being included under the heading of Insects—a classification which is suggestive of that of the railway company. On the whole, however, the subject-matter is well and conveniently arranged, but the absence of an index is to be regretted.

As was to be expected, the papers are of unequal merit. Some of them are little more than abstracts of previously issued work, some are highly theoretical and were read to invite discussion, but a certain number contain records of original observations which are published here for the first time. In his opening address the President, Professor F. A. E. Crew, does well to call attention to the difference between puberty and maturity which may be distinct physiological states occurring separately in time. Thus, in the mouse, with which the paper chiefly deals, puberty occurs before maturity, the onset of which is gradual. The point is of great importance both to the sexual physiology of man and to that of the domestic animals and has an obvious bearing on the question as to the advisability of using sires of early age (e.g. ram lambs) for purposes of breeding. In this connection it may be pointed out that in some animals (e.g. the stickleback as shown by Craig-Bennett) the order of development of the sexual and reproductive processes is reversed, for complete spermatogenesis may be accomplished prior to the complete attainment of sexual maturity and the capacity for seminal ejaculation.

Professor Ch. Champy, in a paper of considerable interest, has drawn attention to the fact that organs providing means of recognition between individual animals belong to two different categories—those which serve the purpose of rendering the individuals of a species aware of one another's presence and those which have a definite sexual character, being indicators of sexual condition. Thus in the rabbit there appear to be scent glands of two kinds, the anal glands, which exist for purposes of general recognition independently of sexual attraction, and the pre-anal glands, the secretion which occurs especially during œstrus. It is noteworthy further that castration inhibits the growth or activity. Mr. J. T. Cunningham's paper on the evolution of secondary sexual characters

and accessory generative organs provides a summary of his more recent views regarding hormonic action and, as was to be expected, is coloured by his belief in the inheritance of acquired characters. Thus, while recognizing the part played by the corpora lutea as a factor in mammary development, he insists upon the effect of the action of sucking on the ventral skin.

Professor H. Lipschütz, in a paper upon the survival of the isolated mammalian ovary, shows that the organ must be maintained at a certain temperature (1° to 3° C.) if it is to be effectively grafted a considerable time (16 days) after isolation. He also studied the oxygen consumption of the isolated ovary using Warburg's manometer and applying Warburg's theory of 'liminal thickness.' Dr. E. Redenz describes the results of experiments in which he found a similarity between the respiratory exchanges of yeast and those of spermatozoa.

There are two interesting papers by Professor J. Benoit. In one of these he records the occurrence of compensatory hypertrophy of the testis after unilateral castration in young birds, but not in adults. In a second communication the effects of exposing the early embryo to ultra-violet rays and thereby destroying the gonocytes in the blastoderm before they have migrated to the gonad. Dr. K. Ponse has recorded the effects of castration in the male toad; as a consequence Bidder's organ will develop into a functional ovary and the ova formed on being fertilized develop into males.

There are several papers dealing with the anterior pituitary gland and its supposed functional correlations. Among the most interesting is one by Dr. Elizabeth Adams on pituitary grafts in Urodele Amphibia. Here it is shown that grafting of the lobe causes ovulation and egg production outside the breeding season. This paper should be studied in connection with a recent memoir by Professor L. Hogben and his collaborators on the pituitary considered in relation to the ovarian function in *Xenopus*. Dr. Carl R. Moore has contributed a general review of the results of his own experiments, and those done in other laboratories in relation to the question of sex hormone antagonism. These results, he believes, justify the abolition of the idea of an antagonism and supply a basis for the construction of a more comprehensive theory which takes account of the part played by the anterior pituitary in relation to the gonads. In criticism of Moore's views, it may be pointed out that he is hardly justified in apparently identifying the female sex hormone with œstrin and that the hormones present in the placenta and in the urine are not necessarily the same.

Among other papers that may be mentioned as of special interest are those of Dr. J. R. Baker and Dr. C. I. B. Voge on chemical contraceptives and Mr. E. J. Dingwall's paper entitled 'The Girdle of Chastity.' Nearly all the contributions, however, are such as will well repay study, either as describing new experimental results or supplying reviews of the present state of our knowledge of problems of importance. The editor is to be warmly congratulated on the successful way in which he has brought together in one volume so many papers of interest.

F. H. A. MARSHALL.